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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/823,828

03/31/2001

Mingte Chen

M-11530 US

6124

33031

7590

05/17/2005

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EXAMINER

HO, ANDY

ART UNIT

PAPER NUMBER

2194

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,828

Applicant(s)

CHEN ET AL.

Examiner

Andy Ho

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-103 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-103 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is in response to the amendment filed 12/27/2004.
2. Claims 1-103 have been examined and are pending in the application.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5, 9-10, 22 and 65 are rejected under 35 U.S.C. 102 (b) as being anticipated by Ding U.S Patent No. 5,699,361.

**As to claim 1**, Ding teaches command definition comprises commands (command codes, columns 9-16) for interfacing with a multi-channel, multi-media, communication queuing system (...communications channels in a network for supporting multimedia communications, i.e., a combination of text, audio, video, control, etc. communications..., lines 6-11 column 1; receipt queues 336 and transmit queues 334, Fig. 7).

**As to claim 5**, it is a method claim of claim 1. Therefore, it is rejected for the same reasons as claim 1 above.

**As to claims 9-10**, they are computer product claims of claim 5. Therefore, they are rejected for the same reasons as claim 5 above.

**As to claim 22**, it is a system claim of claim 1. Therefore, it is rejected for the same reasons as claim 1 above.

**As to claim 65**, it is an apparatus claim of claim 1. Therefore, it is rejected for the same reasons as claim 1 above.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4, 6-8, 11-21, 23-40, 43-64 and 66-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ding in view of Kitaj U.S Patent No. 5,946,399.

**As to claim 2**, Ding further teaches commands to request media type lists and command event lists (lines 6-30 column 5). Ding does not explicitly teach driver object and service object. Kitaj teaches a system of communication between client applications and a device using multiple channels within a device driver (channels 218-226 of device driver 104, Figs. 1-2). The device driver operates to create driver objects in each of the channels (red data write object of red data write channel, lines 48-49 column 5; black data write object for black data write channel, lines 56-57 column 5; line 48 column 5 to line 4 column 6); request service object (i.e. for each application domain object there is a corresponding device driver object. For example, the command

channel A object is shown. These objects process requests for actions which come from the application domain. The command channel object shown, for example, processes incoming command requests over a "Command Write" simplex channel. When such a command request comes in, the object generates a request to a separate object, the input event scheduler, for permission to perform a requested action..., lines 31-40 column 8); release driver object (lines 5-25 column 6). It would have been obvious to apply the teachings of Kitaj to the system of Ding because by creating driver objects and service objects, data of different kinds would be separately controlled via separated channels as disclosed by Kitaj (lines 28-37 column 2).

**As to claim 3**, Ding further teaches command to cancel queued events (...the transmit queue 334-1 corresponds to a channel with non-replaceable access mode, the packet cannot be accepted..., lines 42-44 column 14). Kitaj further teaches commands to release service objects (lines 5-25 column 6), issue a notice when handling of an event is completed (the black data write object signals the input event scheduler that it has completed its write operation, lines 16-18 column 10), invoke commands (signal from one object to another object, lines 10-11 column 10); release, suspend and resume work items (line 47 column 9 to line 25 column 10), handle queued events (...the black data write object receives the signal from the input event scheduler object. In step 518, the black data write object copies the data to a fixed location in the cryptographic card shared memory..., lines 10-13 column 10). Note the discussion of claim 2 above for reason of combining references.

**As to claim 4**, Ding further teaches commands to serialize work items (... IP process 62 generates a segment descriptor for each segment indicating the memory location in which the segment is stored. The IP process 62 then enqueues the segment descriptor into one of the UDP receive queues 80..., lines 46-49 column 3). Kitaj further teaches commands to start a work item (... the black data write object receives the signal from the input event scheduler object. In step 518, the black data write object copies the data to a fixed location in the cryptographic card shared memory..., lines 10-13 column 10), release work items (pass read data from a cryptographic card to the client application after being decrypted, lines 28-30 column 10), save work item contexts (transfers the data into an internal buffer, lines 46-47 column 10), restore work item contexts (lines 57-62 column 10), free work item storage (erases its internal buffer so that the data cannot be copied to any other location, lines 13-16 column 10), begin and end batch processing (... black data write object copies the data to a fixed location in the cryptographic card shared memory, the black data write object signals the input event scheduler that it has completed its write operation..., lines 11-18 column 10). Note the discussion of claim 2 above for reason of combining references.

**As to claims 6-8**, they are method claims of claims 2-4, respectively. Therefore, they are rejected for the same reasons as claims 2-4 above.

**As to claim 11**, it is a system claim of claims 1-2. Therefore, it is rejected for the same reasons as claims 1-2 above.

**As to claims 12-19**, they are system claims of claim 4. Therefore, they are rejected for the same reasons as claim 4 above.

**As to claim 20**, Kitaj further teaches a client object interfaces with a communication channel driver using a portion of the command definition (Command channel object 304 controls the movement of command requests and command responses between the client applications and the cryptographic card, lines 8-11 column 6).

**As to claim 21**, Ding further teaches communication channels wherein each correspond to one type of communication media (...channel type definition step of the formulation process enables a system designer to predefine different channel types, each of which is suited for carrying packets of a respective type of communication, i.e., interactive communications, streamed data, control data, reliable data, etc..., lines 10-15 column 6). Kitaj further teaches client objects wherein each interfaces with a service object in a communication channel driver using a portion of the command definition (Command channel object 304 controls the movement of command requests and command responses between the client applications and the cryptographic card, lines 8-11 column 6). Note the discussion of claim 2 above for reason of combining references.

**As to claims 23-27**, they are system claims of claim 2. Therefore, they are rejected for the same reasons as claim 2 above.

**As to claims 28-33**, they are system claims of claim 3. Therefore, they are rejected for the same reasons as claim 3 above.

**As to claim 34**, it is a system claim of claim 2. Therefore, it is rejected for the same reasons as claim 2 above. Ding as modified further teaches the channel driver

interfaces with a communication server (streamer process 330, Fig. 7) and at least one communication device (A/V I/O device 124, Fig. 6).

**As to claim 35**, Ding as modified further teaches the communication server interfaces with a queuing system (queues 334 and 336, Fig. 7).

**As to claim 36**, Ding further teaches communication devices for different types of media (A/V I/O device 124 of each system 100, Fig. 6; ...channel type definition step of the formulation process enables a system designer to predefine different channel types, each of which is suited for carrying packets of a respective type of communication, i.e., interactive communications, streamed data, control data, reliable data, etc..., lines 10-15 column 6). Kitaj further teaches the channel driver instantiate driver objects (red data write object of red data write channel, lines 48-49 column 5; black data write object for black data write channel, lines 56-57 column 5; line 48 column 5 to line 4 column 6). Note the discussion of claim 2 above for reason of combining references.

**As to claim 37**, Kitaj further teaches the driver object instantiates a service object (...for each application domain object there is a corresponding device driver object. For example, the command channel A object is shown. These objects process requests for actions which come from the application domain. The command channel object shown, for example, processes incoming command requests over a "Command Write" simplex channel. When such a command request comes in, the object generates a request to a separate object, the input event scheduler, for permission to perform a requested action..., lines 31-40 column 8).

**As to claim 38**, Kitaj further teaches each service object includes a task thread to listen for incoming events (lines 30-49 column 8).

**As to claim 39**, it is a system claim of claims 34-35 and 37. Therefore, it is rejected for the same reasons as claims 34-35 and 37 above.

**As to claim 40**, Ding as modified further teaches the queuing system assigns work items to agents (The information is dequeued in a first-in first-out order from the UDP queues to the application program which is to receive the segment, lines 50-53 column 3).

**As to claim 43**, it is a system claim of claim 38. Therefore, it is rejected for the same reasons as claim 38 above.

**As to claim 44**, Kitaj further teaches the task thread invokes an event handling function when an event is detected (lines 30-49 column 8).

**As to claim 45**, it is a method claim of claims 1, 2, 34 and 36. Therefore, it is rejected for the same reasons as claims 1, 2, 34 and 36 above.

**As to claims 46-50**, they are method claims of claim 2. Therefore, they are rejected for the same reasons as claim 2 above.

**As to claims 51-55**, they are method claims of claim 3. Therefore, they are rejected for the same reasons as claim 3 above.

**As to claim 56**, it is a method claim of claim 35. Therefore, it is rejected for the same reasons as claim 35 above.

**As to claims 57-58**, they are method claims of claim 38. Therefore, they are rejected for the same reasons as claim 38 above.

**As to claim 59**, it is a method claim of claims 38 and 44. Therefore, it is rejected for the same reasons as claims 38 and 44 above.

**As to claim 60**, Ding as modified further teaches queuing the event to a memory cache (336-N+1 of receipt queue 336, Fig. 7).

**As to claim 61**, Ding as modified further teaches indication the arrival of the event (lines 22-65 column 18).

**As to claim 62**, Ding as modified further teaches dequeuing the event out of the cache and processing the event (The information is dequeued in a first-in first-out order from the UDP queues to the application program which is to receive the segment, lines 50-53 column 3).

**As to claims 63-64**, they are computer product claims of claim 45. Therefore, they are rejected for the same reasons as claim 45 above.

**As to claims 66-68**, they are apparatus claims of claims 2-4, respectively. Therefore, they are rejected for the same reasons as claims 2-4 above.

**As to claim 69**, it is an apparatus claim of claims 1, 2, 34 and 36. Therefore, it is rejected for the same reasons as claims 1, 2, 34 and 36 above.

**As to claims 70-74**, they are apparatus claims of claim 2. Therefore, they are rejected for the same reasons as claim 2 above.

**As to claims 75-79**, they are apparatus claims of claim 3. Therefore, they are rejected for the same reasons as claim 3 above.

**As to claims 80-81**, they are apparatus claims of claims 35 and 38, respectively. Therefore, they are rejected for the same reasons as claims 35 and 38 above.

**As to claim 82**, it is an apparatus claim of claims 37-38. Therefore, it is rejected for the same reasons as claims 37-38 above.

**As to claim 83**, it is an apparatus claim of claims 38 and 44. Therefore, it is rejected for the same reasons as claims 38 and 44 above.

**As to claims 84-86**, they are apparatus claims of claims 60-61, respectively. Therefore, they are rejected for the same reasons as claims 60-61 above.

**As to claims 87-91**, they are method claims of claim 2. Therefore, they are rejected for the same reasons as claim 2 above.

**As to claims 92-96**, they are method claims of claim 3. Therefore, they are rejected for the same reasons as claim 3 above.

**As to claims 97-98**, they are method claims of claim 35. Therefore, they are rejected for the same reasons as claim 35 above.

**As to claim 99**, it is a method claim of claims 37-38. Therefore, it is rejected for the same reasons as claims 37-38 above.

**As to claim 100**, it is a method claim of claims 38 and 44. Therefore, it is rejected for the same reasons as claims 38 and 44 above.

**As to claims 101-103**, they are method claims of claims 60-61, respectively. Therefore, they are rejected for the same reasons as claims 60-61 above.

5. Claims 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ding in view of Davidson U.S Patent No. 5,983,019.

**As to claim 41**, Ding does not explicitly teach the commands are implemented in a data link library. Davidson teaches commands are implemented in a command library (command library contains an identification of each command that can be invoked by the interpreter, lines 52-54 column 3). It would have been obvious to apply the teachings of Davidson to the system of Ding because this allows the command interpreter to invoke the commands as disclosed by Davidson (lines 50-67 column 3).

**As to claim 42**, Davidson further teaches the commands are accessed with a function pointer to the data link library (the command will be found in the TCL command library together with an associated pointer to the implementing code that will carry out the desired function of the command, lines 54-60 column 3).

### ***Response to Arguments***

6. Applicant's arguments filed 12/27/2004 have been fully considered but they are not persuasive.

Applicant argued that Ding reference does not teach command definition comprising commands (Remarks, last complete paragraph page 14 to last paragraph page 15). In response, Ding teaches the command codes (columns 9-16) for use to implement a system of communications channels in a network for supporting multimedia communications, i.e., a combination of text, audio, video, control, etc. communications (lines 6-11 column 1) using queues (receipt queues 336 and transmit queues 334, Fig. 7). For example, the code allows an application to submit requests and execute the codes to allocate the communication channel (...an application submits requests for

allocating communications channels of the predefined types..., lines 12-15 column 9; lines 39-42 column 10) wherein the request or command specifying parameters (...in allocating a channel, the application specifies user-definable parameters for the channel..., lines 37-38 column 5; ...the user definable parameters can specify the number of buffers to allocate to the communication, a bandwidth requirement, a quality of service, a direction, etc. Such information controls how often and in what priority the real time scheduler signals the streamer process to transmit packets for each channel. Applications submit data for transmission on specified channels to the streamer process which segments and packetizes the data for transmission. The streamer process generates a descriptor for each packet and enqueues the descriptor into the transmit queue assigned to that specific channel..., lines 53-64 column 5). The reference meets the limitation as claimed.

Applicant argued that Ding and Kitaj references can not be combined since they address different problems from the patent application (Remarks, page 16 continue to incomplete first paragraph page 17). In response, while Ding and Kitaj references may be used to solve other problems, it does not preclude using these references in the claim rejections.

Applicant argued that Ding reference does not teach commands request media type list and command event list (Remarks, last incomplete paragraph page 17 continue to line 2 page 18). In response, Ding teaches (lines 6-30 column 5) the application sends out a request for a particular type of communication channel (...a formulation process is provided for defining different types of communications channels and for

allocating channels of the predefined types. A real-time scheduler process receives requests from an application process, contemporaneously executing on the host, for allocating channels. In response, the real-time scheduler process determines if adequate resources are available to support the additional requested communication channels. If so, the real-time scheduler process causes the formulation process to allocate the channel..., lines 8-17 column 5). The reference meets the limitation as claimed.

Applicant argued that Kitaj does not teach create and release driver object (Remarks, first complete paragraph page 18). In response, as clearly disclosed in the claim rejection above, Kitaj teaches a system of communication between client applications and a device using multiple channels within a device driver (channels 218-226 of device driver 104, Figs. 1-2). The device driver operates to create driver objects in each of the channels (red data write object of red data write channel, lines 48-49 column 5; black data write object for black data write channel, lines 56-57 column 5; line 48 column 5 to line 4 column 6); release driver object (lines 5-25 column 6). The reference meets the limitation as claimed.

Applicant argued that Kitaj does not teach request service objects (Remarks, first complete paragraph page 18). In response, again as clearly disclosed in the claim rejection above, Kitaj teaches requesting service object (...for each application domain object there is a corresponding device driver object. For example, the command channel A object is shown. These objects process requests for actions which come from the application domain. The command channel object shown, for example, processes

incoming command requests over a "Command Write" simplex channel. When such a command request comes in, the object generates a request to a separate object, the input event scheduler, for permission to perform a requested action..., lines 31-40 column 8). The reference meets the limitation as claimed.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy Ho whose telephone number is (571) 272-3762. A voice mail service is also available for this number. The examiner can normally be reached on Monday – Friday, 8:30 am – 5:00 pm.

Art Unit: 2194

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Any response to this action should be mailed to:

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A.H  
May 6, 2005

  
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